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To The Commissioner of Patents and Trademarks: Please record the attached original document or copy thereof.

1. Name of conveying party(ies): Changick Kim Additional name(s) of conveying party(ies) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		2. Name and address of receiving party(ies): Name: <i>Epson Research and Development, Inc.</i> Internal Address: Street Address: <i>150 River Oaks Parkway, Suite 225 San Jose, California 95134</i> Additional name(s) and addresses attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
3. Nature of Conveyance: <input checked="" type="checkbox"/> Assignment <input type="checkbox"/> Merger <input type="checkbox"/> Security Agreement <input type="checkbox"/> Change of Name <input type="checkbox"/> Other Execution Date: October 19, 2001			
4. Application number(s) or patent number(s): If this document is being filed together with a new application, the execution date of the application is: October 19, 2001 A. Patent Application No(s). B. Patent No(s). Additional numbers attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
5. Name and address of party to whom correspondence concerning document should be mailed: Intellectual Property Department Epson Research And Development Inc. 150 River Oaks Parkway, Suite 225 San Jose, CA 95134		6. Total number of applications and patents involved: 1 7. Total fee (37 CFR 3.41)\$40 <input type="checkbox"/> Enclosed <input checked="" type="checkbox"/> Authorized to be charged to deposit account. 8. Deposit Account Number: <u>19-2746</u>	
DO NOT USE THIS SPACE			
9. Statement and signature. <i>To the best of my knowledge and belief, the foregoing information is true and correct and any copy is a true copy of the original document.</i> Michael T. Gabrik <u>Michael T. Halik</u> Date: October 23, 2001 Registration No. 32,896			
Total number of pages including cover sheet, attachments and document:			2

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PATENT

ASSIGNMENT

For good and valuable consideration, the receipt of which is hereby acknowledged, I/WE, the undersigned,

Changick Kim

who have created a certain invention for which an application for United States Letters Patent was executed by me concurrently herewith and entitled:

REDUCING BLOCKING AND RINGING ARTIFACTS IN LOW-BIT-RATE CODING

Do hereby sell, assign and transfer to EPSON RESEARCH AND DEVELOPMENT, INC., a corporation of California, having a place of business at 150 River Oaks Parkway, Suite 225, San Jose, California, 95134, its successors, assigns, and legal representatives, the full and exclusive right to said invention and said application and to any and all inventions described in said application for the United States, its territorial possessions and all foreign countries, and the entire right, title and interest in and to any and all Letters Patent which may be granted therefor in the United States, its territorial possessions and all foreign countries; and in and to any and all continuations-in-part, continuations, divisions, substitutes, reissues, extensions thereof, and all other applications for Letters Patent relating thereto which have been or shall be filed in the United States, its territorial possessions and/or any foreign countries, and all rights, together with all priority rights, under any of the international conventions, unions, agreements, acts, and treaties, including all future conventions, unions, agreements, acts, and treaties;

Agree that EPSON RESEARCH AND DEVELOPMENT, INC., hereinafter referred to as Assignee, may apply for and receive Letters Patent for said invention and said inventions, hereinafter referred to as said invention, in its own name, in the United States, its territorial possessions, and all foreign countries; and that, when requested to carry out in good faith the intent and purpose of this assignment, at the expense of said Assignee, its successors, assigns and legal representatives, the undersigned will execute all continuations-in-part, continuations, divisions, substitutes, reissues, extensions thereof, execute all rightful oaths, assignments, powers of attorney and other papers, testify in any legal or quasi legal proceedings; communicate to said Assignee, its successors, assigns or legal representatives all facts known to the undersigned relating to said invention and the history thereof; and generally do everything possible which said Assignee, its successors, assigns, or legal representatives shall consider desirable for aiding in securing, maintaining and enforcing proper patent protection for said invention and for vesting title to said invention and all applications for patents on said invention in said Assignee, its successors, assigns, or legal representatives; and

Covenant with said Assignee, its successors, assigns, or legal representatives that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

IN TESTIMONY WHEREOF I/WE have hereunto set MY/OUR signature on the date indicated below.

Date: 10 / 19 / 2001
Month/Day/Year

Changick Kim
Changick Kim